REMARKS

Present Status of the Application

The drawings are objected to according to MPEP 608.02(g). Claims 1, 3, 4, 7 and 8 are objected to because of some informalities. The Office Action rejected all pending claims 1-9. Specifically, the Office Action rejected claims 8 and 9 under 35 U.S.C. 112, second paragraph. Moreover, the Office Action rejected claims 1-3 and 5-7 under 35 U.S.C. 103(a), as being anticipated by White et al. (U.S. Patent 5,477,541) in view of applicant's admitted prior art, and rejected claim 4 under 35 U.S.C. 103(a) as being unpatentable over White and applicant's admitted prior art and further in view of Smith (U.S. Patent 5,400,326). Applicants have amended the drawing and the specification to overcome the objections and have amended claims 1, 3, 4, 7 and 8 to improve clarity, and have added new claims 10-20. After entry of the foregoing amendments, claims 1-20 are pending in the present application, and reconsideration of those claims is respectfully requested.

Discussion of Objections

The Office Action objected Fig.2 because it is not designated by "Prior art" while only that which is old is illustrated. In response thereto, applicants have inserted words (PRIOR ART) in Fig.2. Further, lines 16-20, page 3 of the Specification are amended to correct some typing errors. Moreover, every feature in the amended Claims 1, 3, 4, 7 and 8 and in the newly added claims 10-20 is shown in Fig. 4 and page 8-14 of the Specification, and no new matter is added.

Discussion of Office Action Rejections

The Office Action rejected claims 8 and 9 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. To address the issue, Applicants have amended the limitation " the remained packet data", which has no sufficient antecedent basis, into "remaining part of the packet". The feature amended in claim 8 is suggested in line 13, page 10 to line 21, page 12 of the Specification, and no new matter is added.

The Office Action rejected claims 1-3 and 5-7 under 35 U.S.C. 103(a) as being unpatentable over White et al. (U.S. Patent 5,477,541, hereinafter White) in view of applicant's admitted prior art (hereinafter A.A.P.A.). Applicants respectfully traverse the rejections for at least the reasons set forth below.

The combination of White and A.A.P.A. does not disclose, teach or suggest the features of "allocating a descriptor and a data buffer, the descriptor for recording a link status between the descriptor and the data buffer ... the data buffer for storing the packet, and the size of the data buffer being fixed ...dividing the data buffer by the logical segmentation size value into a plurality of segments..." as recited in claim 1 (these features can find support on page 11, lines 9-12 of the specification). More specifically, neither White nor A.A.P.A. teaches to divide a data buffer, which was linked by only one descriptor, into several segments according to a logical segmentation size value. Lines 3-5, page 5 of the Office Action stated that " ... dividing the data buffer according to the logical segmentation size value (specification, page 3, lines 8-9 by *storing*

the packet in the buffer, the buffer has been divided according to the logical segmentation size value or the packet's length) ... ". However, specification of the present application, page 3, lines 2-4, stated that " Conventionally, the storage space of the packet buffer 120b is *sized dynamically in accordance with the length of the received packet* 100 so that the packet buffer 120b is enough to accommodate the received packet 100." Therefore, it is very clear that **the logical segmentation size value or packet's length raised by the Office Action decided the size of the data buffer, but not further divided the data buffer into several segments**. In other words, the A.A.P.A. divides each packet buffer from the storage unit 200 according to length of the received packet (or a logical segmentation size value), but the present invention divides each packet buffer from the storage unit 200 according to a **fix size** and then **further divides each packet buffer into several segments** according to a logical segmentation size value. Therefore, those with ordinary skills of the art cannot combine White and A.A.P.A to obtain the technical features as claimed in claim 1 since both of White and A.A.P.A. fail to disclose, teach or suggest the technical features.

Furthermore, page 3, lines 21-24 of the present application's specification, on which the Office Action depends to reject the present application, states that " When an OK interrupt signal appears in a certain descriptor, it indicates that this descriptor is the *last one*, and consequently, the computer unit will retrieve all the remaining packet data from the packet buffer 120b." It can be known that a packet may be stored in several packet buffers in the A.A.P.A., and so is White (please refer to White, column 16, lines 18-21). In the A.A.P.A., each time a packet buffer (i.e. data buffer) is read, a write-back operation is performed to ensure the packet buffer is released.

Therefore, several write-back operations will be performed during receiving or transmitting a packet if the packet is stored in several packet buffers. In another aspect, if only one packet buffer is used to store the packet, no Early-Receive operation will occur. Combining White and A.A.P.A., those with ordinary skill might able to use fix-sized packet buffers to store a packet, but *the Early-Receive operation will not occur if only one packet buffer is used*. However, **in the present application, even a packet is stored in only one packet buffer (or data buffer, as claimed in claim 1, lines 4-5), Early-Receive operation is still performed once the packet buffer receives data whose length is more than the logical segmentation size value**.

Due to the technical difference stated above, the present application simplifies the packet receiving-transmitting operation and enhances the system performance even only one packet buffer (data buffer) is used to store a packet. Combination of White and A.A.P.A. can not provide the same technique, and therefore the combination did not disclose, teach or suggest the feature as claimed in claim 1.

Accordingly, claim 1 of the present application is patentable over White in view of the A.A.P.A.

For at the same reasons, claims 2-3 and 5 are patentable over White in view of A.A.P.A. as a matter of law because claim 1, on which claims 2-3 and 5 depended, is patentable over White and A.A.P.A.

In regard to claim 4, because the purpose of Smith (U.S. Patent 5,400, 326) and the present application is different, it is not reasonable to combine Smith here in order to achieve the present application. More specifically, Smith emphasized on storing a frame by using a plurality

of small buffers (please refer to Smith, column 3, lines 18-26 and lines 36-45), which <u>teaches</u>

<u>away from using one buffer to store a packet (or frame)</u> as claimed in claim 1, there are no

reasons that those with ordinary skill will apply the technique suggested in Smith onto the

situation where only one buffer is used to store a packet. In other words, although Smith taught to

transmit data to the system memory when a minimum amount has been received in Fig.4, it **did**

not teach how to divide each buffer into segments, and, A.A.P.A. and White did not teach this

technique, either. Furthermore, lines 11-14 on page 7 of the Office Action states "It would have

been obvious to one with ordinary skill in the art at the time of invention to include the reading

of data in the buffer with the method of claim 1 *for the purpose of making room in the buffer for*

the incoming data." However, because each buffer can be used again only after a write-back

operation is performed, **the purpose of the present application is** not making room in the buffer

for the incoming data, but **reducing number of required interrupts during a receiving-**

transmitting operation (see line 25, page 4 to line 6, page 5 of the present application's

Specification). Because the purpose of Smith and the present application is different from each

other, combination reasons proposed by the Office Action is not reasonable, and **Smith should**

not be combined here for solving a different purpose.

There is no suggestion to combine Smith because Smith teaches away from using one

buffer to store one packet, with different purpose from the present application, and most of all,

does not teach how to divide a buffer into several segments and transmits data in segment.

Even if the references were combined as proposed, the combination would still fail to

show dividing one buffer, which is linked by a descriptor, into several segments as recited in

claim 1. Therefore, claim 1 is patentable over White and A.A.P.A. in view of Smith, and its dependent claim 4 is patentable over White and A.A.P.A. in view of Smith for at least the same reasons.

Claims 6-7 were rejected, but no specific discussion about the rejection was found in the Office Action. Applicant respectfully submits that claims 6-7 are patentable over White, A.A.P.A. and in view of Smith for at least the reasons discussed above in connection with claims 1-5, since claims 6-7 recites similar technical features as claim 1.

Claims 10-20 are newly added for more fully protect the invention. For at least the same reasons set forth above, these claims patently define over the prior arts as well.

For at least the foregoing reasons, Applicant respectfully submits that independent claims 1, 6, 8, 10 and 16 patently define over the prior art references and should be allowed. For at least the same reasons, dependent claims 2-5, 7, 9, 11-15 and 17-20 patently define over the prior art as well.
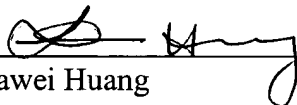
CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1-20 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,
J.C. PATENTS

Date: 6 / 7 / 2004

Jiawei Huang
Registration No. 43,330

4 Venture, Suite 250
Irvine, CA 92618
Tel.: (949) 660-0761
Fax: (949)-660-0809